

Oil Sample Analysis Report

**Marine Safety Detachment St. Thomas
Case / Activity Number 6367503**

**Marine Safety Laboratory
Case Number 18-067**



U.S. Department of
Homeland Security

United States
Coast Guard



Manager
U.S. Coast Guard
Marine Safety Laboratory

1 Chelsea Street
New London, CT 06320
Phone: (860) 271-2704
Fax: (860) 271-2641

16450
26 Mar 2018

MEMORANDUM

From: *Kristy Juare*
K. Juare
CG MSL

To: CG MSD St. Thomas

Subj: OIL SAMPLE ANALYSIS REPORT, MSL CASE NUMBER 18-067
UNIT CASE / ACTIVITY NUMBER 6367503

1. The laboratory analysis of this case has been completed and our report is forwarded. The technical data supporting the report (spectrograms and chromatograms) have been archived at our facility and are available upon request. We will maintain the oil samples in refrigerated storage pending final case disposition.
2. Questions concerning this report or the analytical methods used should be directed to the Supervisor of Analysis, Kristy Juare.

#

Enclosure: (1) MSL Report 18-067

**United States Coast Guard
Marine Safety Laboratory
Oil Sample Analysis Report
18-067**

Requestor: Marine Safety Detachment St. Thomas

Unit Case/Activity Number: 6367503

Received: 23-Mar-18

Via: Federal Express 7718 0625 5081

Number Of Samples: 14

Lab ID for Spills: 1 and 14

Lab ID for Sources: 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13

Lab ID for Background: 2

Analysis Methods:

- ☒ GAS CHROMATOGRAPHY (GC)
- ☒ GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GC-MS)
- ☐ INFRARED SPECTROSCOPY (IR)

Laboratory's Conclusion (as explained below): MATCH

RESULTS:

1. Samples 18-067-1 and 14 were specified to be representative of spilled oil. Analysis indicates:
 - A. Sample 18-067-1 contains slightly weathered light fuel oil mixed with a small amount of lubricating oil. Non-petroleum contamination is present.
 - B. Sample 18-067-14 contains slightly weathered light fuel oil mixed with a small amount of lubricating oil with overall characteristics somewhat similar to those of spill sample 18-067-1. Important similarities strongly suggest a relationship. However, not all differences noted are conclusively attributable to weathering or non-petroleum contamination based on the analysis conducted.
2. Suspected source sample 18-067-11 contains light fuel oil mixed with a small amount of lubricating oil with characteristics similar to those of spill sample 18-067-1. Differences are attributable to weathering and non-petroleum contamination.
3. Suspected source samples 18-067-4 and 12 contain mixtures of gasoline, light fuel oil, and a small amount of lubricating oil with characteristics somewhat similar to those of spill sample 18-067-1. Important similarities strongly suggest a relationship. However, not all differences noted are attributable to weathering or non-petroleum contamination.
4. Suspected source sample 18-067-7 contains light fuel oil with characteristics somewhat similar to those of spill sample 18-067-1. However, not all differences noted are attributable to weathering or non-petroleum contamination.
5. Suspected source samples 18-067-3 contains lubricating oil with characteristics different from those of spill samples 18-067-1 and 14. Differences are not attributable to weathering or non-petroleum contamination.
6. Suspected source samples 18-067-5 and 6 contain gasoline with characteristics different from those of spill samples 18-067-1 and 14. Differences are not attributable to weathering or non-petroleum contamination.

SUPERVISOR OF ANALYSIS

K. JUAIRE



DATE

26-Mar-18

**United States Coast Guard
Marine Safety Laboratory
Oil Sample Analysis Report
Continuation
18-067**

7. Suspected source samples 18-067-8 and 9 contain mixtures of light fuel oil and lubricating oil with characteristics different from those of spill samples 18-067-1 and 14. Differences are not attributable to weathering or non-petroleum contamination.
8. Suspected source sample 18-067-10 contains light fuel oil with characteristics different from those of spill samples 18-067-1 and 14. Differences are not attributable to weathering or non-petroleum contamination.
9. Suspected source sample 18-067-13 contains petroleum oil. The quantity is not sufficient to determine the type of product present or for comparison purposes.
10. Sample 18-067-2 was specified to represent clean water. No petroleum oil was detected.

CONCLUSIONS:

1. Suspected source sample 18-067-11 and spill sample 18-067-1 are derived from a common source of petroleum oil.
2. Samples 18-067-4, 12, and 14 are related to sample 18-067-1 through a common source of petroleum oil. However, differences not attributable to weathering or non-petroleum contamination are present.
3. Suspected source samples 18-067-3, 5, 6, 7, 8, 9, and 10 and spill samples 18-067-1 and 14 are not derived from a common source of petroleum oil.
4. Suspected source sample 18-067-13 does not contain a quantity of petroleum oil sufficient for correlation analysis.
5. Sample 18-067-2 contains essentially oil-free water.

SUPERVISOR OF ANALYSIS

K. JUAIRE



DATE 26-Mar-18

**United States Coast Guard
Marine Safety Laboratory**

**Oil Spill Identification Analysis
Cost Recovery Documentation**

Laboratory Case Number: 18-067
Requestor: Marine Safety Detachment St. Thomas
Unit Case/Activity Number: 6367503
Number of Samples: 15
Cost Per Sample Prepared: \$20.00
Total Costs of Sample Preparation: \$300.00
Number of Analyses: 32
Cost Per Sample Analyzed: \$86.00
Total Costs for Analysis: \$2,752.00
TOTAL COSTS: \$3,052.00

This documentation is provided for purposes of Phase IV - Documentation and
Cost Recovery under the National Oil and Hazardous Substances Pollution
Contingency Plan (40 CFR Part 300)

Signature:



Date: 26 Mar 18

**United States Coast Guard
Marine Safety Laboratory Sample
Check-In Log**

MSL Case/Activity Number: 18-067

Requestor: Marine Safety Detachment St. Thomas **Unit Case Number:** 6367503

Federal Project Number: **Delivery Method:** Federal Express

Received Date: 23 Mar 18 **Delivery Number:** 7718 0625 5081

Priority: Yes **Rush:** No **Comparison:** No

Lab ID 18-067	Sample Descriptions from Sample Jars		Spill	Source
1	1	6367503-NJJ-11 WATER BY OUTFLOW PIPE, WITHIN BOOMED AREA. 05MAR2018 0952	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	2	6367503-NJJ-12 BACKGROUND SAMPLE TAKEN AWAY FROM SHEEN AREA. 05MAR2018 0958	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	3	6367503-NJJ-13 OILED SOIL IN FRONT OF PATRICK CHARLES ENTERPRISES TRUCKS, NEXT TO STORM DRAIN. 05MAR2018 1016	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4	4	6367503-NJJ-14 ISO TANK WITH DIRTY WATER/OIL. 05MAR2018 1043	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5	5	6367503-NJJ-15 PREMIUM GAS FROM PUMA TANK #46. 05MAR2018 1343	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6	6	6367503-NJJ-16 REGULAR GAS FROM PUMA TANK #54. 05MAR2018 1344	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7	7	6367503-NJJ-17 DIESEL FROM PUMA TANK #47 05MAR2018 1345	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8	8	6367503-DMT-18 OILED SOIL FROM OUTSIDE CONTAINMENT AT PATRICK CHARLES ENTERPRISES MAIN YARD. 05MAR2018 1402	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9	9	6367503-DMT-19 OIL FROM INSIDE CONTAINMENT AT PATRICK CHARLES ENTERPRISES MAIN YARD. 05MAR2018 1407	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10	10	6367503-NJJ-20 #2 DIESEL FROM WAPA TANK #14. 05MAR2018 1458	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Remarks: Sample 2 designated as "Spill" for comparison purposes.				

Samples checked in by: MST2 CHELSEA WARREN

Date: 23 Mar 18

Sample Custodian: MST1 SEAN JANNE

Date: 26 MAR 18

Supervisor of Analysis: K. JUAIRE

Date: 26 mar 18

**United States Coast Guard
Marine Safety Laboratory
Check-In Log**

MSL Case Number: 18-067

Lab Number 18-067	Sample Descriptions from Sample Jars	Spill	Source
11	11 6367503-NJJ-21 SOURCE- SHEEN NET SAMPLE 06MAR2018 0928	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12	12 6367503-NJJ-22 MANHOLE SAMPLE- ACROSS FROM PUMA. 06MAR2018 1011	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13	13 6367503-NJJ-23 PUMA FACILITY SHEEN SAMPLE 07MAR2018 0920	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14	14 6367503-NJJ-24 SOURCE: SHEEN SAMPLE 15MAR2018 1315	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15		<input type="checkbox"/>	<input type="checkbox"/>
16		<input type="checkbox"/>	<input type="checkbox"/>
17		<input type="checkbox"/>	<input type="checkbox"/>
18		<input type="checkbox"/>	<input type="checkbox"/>
19		<input type="checkbox"/>	<input type="checkbox"/>
20		<input type="checkbox"/>	<input type="checkbox"/>

Samples checked in by: MST2 CHELSEA WARREN

Date: 23 Mar 18

Sample Custodian: MST1 SEAN JANNE

Date: 26 MAR 18

Supervisor of Analysis: K. JUAIRE

Date: 26 Mar 18